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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,822	02/06/2004	Lotfi Hedhli	IR 3699 NP	7965

31684 7590 06/13/2005

ARKEMA INC.
PATENT DEPARTMENT - 26TH FLOOR
2000 MARKET STREET
PHILADELPHIA, PA 19103-3222

EXAMINER	
TUROCY, DAVID P	

ART UNIT	PAPER NUMBER
1762	

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/773,822	HEDHLI ET AL.	
	Examiner	Art Unit	
	David Turocy	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-9 and 11-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-9 and 11-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The applicant's amendments, filed 5/11/2005, have been fully considered and reviewed by the examiner. In light of the amendments to the specifications, the objection to the specification has been withdrawn. The examiner notes the cancellation of claim 10, therefore the 35 USC 112 rejection has been withdrawn. Claim 2 has been incorporated into independent claim 1. Claims 1, 3-9 and 11-16 pending.

Response to Arguments

2. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, as stated by the applicant, the Schutze reference describes disadvantages of using the vacuum methods, such as that disclosed by Dearnley, and therefore one of ordinary skill in the art would be motivated to modify Dearnley to overcome the disadvantages of such vacuum methods as taught by Schutze.

The applicant has argued against the Dearnley reference stating that they do not teach of a carrier gas and therefore they teach away, however, the combination of Dearnley and Schutze discloses using a carrier gas during atmospheric pressure.

The applicant has argued against the Schutze reference stating that it teaches a plasma using helium, while the disclosure of Schutze may prefer using helium, Schutze discloses using other carrier gases, including nitrogen and hydrogen during the process and selection of the carrier gas based on the electrode spacing, pressure and the voltage applied to form the plasma. It is the examiners position that the disclosure of Shultz, while preferring helium, is not limited to helium as the only carrier gas. Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. In re Susi, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). It is the examiners position that the disclosure of Schutze reasonably suggests to one of ordinary skill in the art at the time of the invention that nitrogen is capable of effectively being used as a carrier gas in a atmospheric plasma coating process.

The applicant has argued against Fornsel reference, stating that since they teach polymer coatings on striated substrate they teach away from the present invention. The examiner respectfully disagrees. The examiner notes Dearnley discloses using plasma during coating and Fornsel, discloses nitrogen, a non-noble gas, is effective as a inert gas during a plasma process because nitrogen can prevent oxidation and one would be motivated to provide nitrogen in the process of Dearnley in view of Shutze to reap the benefits no oxidation.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

The applicant has argued against the Hulett reference stating that it is unrelated art, slurry coating, and the proposed modification of Dearnley would render the prior art unsatisfactory for its intended use because Dearnley discloses a vacuum system, where the enclosed area is so small to prevent moving of the membrane. The examiner respectfully disagrees and direct the applicant to Column 2, lines 6-20, where Dearnley discloses using vacuum systems during a reel-to-reel and web coating process. While the examiner agree Hulett teaches of a slurry coating a MEA, they discloses during a web coating process of a MEA the membrane is advanced beneath the nozzle.

The applicant has argued against the Yasumoto reference stating that the claim is directed to discharge enhanced chemical vapor deposition rather then a method of depositing the catalyst on the polymer electrode membrane. While the examiner agrees, Yasumoto is utilized as a showing that it is known in the art at the time of the

invention to use a polymer electrode membrane, as claimed by applicant, when coating a catalysts onto the substrate to form a electrode. Therefore the examiner is not relying on the method of coating, but rather the coated substrate.

The applicant has argued against the Kamo reference stating that they teach of the platinum/ruthenium alloy on a carbon powder rather then directly on the membrane. However, Dearnley discloses applying platinum catalyst and Kamo teaches that a known substitute for a platinum catalyst is a platinum/ruthenium alloy and one would be motivated to substitute the platinum/ruthenium alloy for the platinum catalyst in order to reap the benefits of having an increase life span and stability.

The applicant has argued against the Haug reference stating that they disclose spraying in a vacuum sputter deposition system, however, Haug is utilized here as a showing that it is known in the art at the time of the invention was made to deposit multiple layers of catalysts to form an electrode. While the examiner agree Haug teaches a vacuum deposition technique, such techniques are shown as undesirable as taught by Schutze.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 1, 3-5, and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6159533 by Dearnaley et al ("Dearnaley") in view of Schütze et al ("Schütze") and further in view of WO01/32949 by Förnsel et al ("Förnsel").

*** Please note US Patent 6800336 is used as a literal translation of WO 01/32949***

These claims are rejected for the same reasons set forth in the office action dated 1/25/2005 in combination with the reasons discussed above in section 2.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6159533 by Dearnaley et al ("Dearnaley") in view of Schütze et al ("Schütze")

and WO01/32949 by Förnsel et al ("Förnsel") further in view of US patent 6074692 by Hulett ("Hulett").

These claims are rejected for the same reasons set forth in the office action dated 1/25/2005 in combination with the reasons discussed above in section 2.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6159533 by Dearnaley et al ("Dearnaley") in view of Schütze et al ("Schütze") and WO01/32949 by Förnsel et al ("Förnsel") further in view of US Patent Publication 2003/0096154 by Yasumoto et al ("Yasumoto").

These claims are rejected for the same reasons set forth in the office action dated 1/25/2005 in combination with the reasons discussed above in section 2.

6. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6159533 by Dearnaley et al ("Dearnaley") in view of Schütze et al ("Schütze") and WO01/32949 by Förnsel et al ("Förnsel") and US Patent Publication 2003/0096154 by Yasumoto et al ("Yasumoto") further in view of US Patent Publication 2004/0180250 by Nanaumi et al ("Nanaumi").

These claims are rejected for the same reasons set forth in the office action dated 1/25/2005 in combination with the reasons discussed above in section 2.

7. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6159533 by Dearnaley et al ("Dearnaley") in view of Schütze et al ("Schütze") and WO01/32949 by Förnsel et al ("Förnsel") and further in view of US Patent Publication 2003/0059659 by Kamo et al ("Kamo").

These claims are rejected for the same reasons set forth in the office action dated 1/25/2005 in combination with the reasons discussed above in section 2.

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6159533 by Dearnaley et al ("Dearnaley") in view of Schütze et al ("Schütze") and WO01/32949 by Förnsel et al ("Förnsel") and further in view of Haug et al ("Haug").

These claims are rejected for the same reasons set forth in the office action dated 1/25/2005 in combination with the reasons discussed above in section 2.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Turocy
AU 1762

TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER